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Propositions

accompanying the PhD thesis

Maintenance Optimization based on Mathematical Modeling

by

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1. In Chapter 2 it is shown that uncertainty in the scale parameter of a lifetime distribution can result in both increasing and decreasing optimal maintenance ages. Under uncertainty in the shape parameter of, for instance, a Weibull lifetime distribution this same effect can be expected. (Chapter 2)
2. When there is uncertainty in the lifetime distribution of a machine, it is always beneficial to initially postpone preventive maintenance actions to reduce the amount of uncertainty. (Chapter 3)
3. Simulation is a suitable method for optimizing single-variable optimization problems. (Chapter 4)
4. Firms should implement condition-based maintenance policies as much as possible. (Chapter 4)
5. Uncertainties in model parameters should also be taken into account when optimizing condition-based maintenance strategies. (Chapter 5)
6. When optimizing maintenance policies, related processes such as production planning, spare parts ordering, and repairmen routing should also be taken into account.